

100

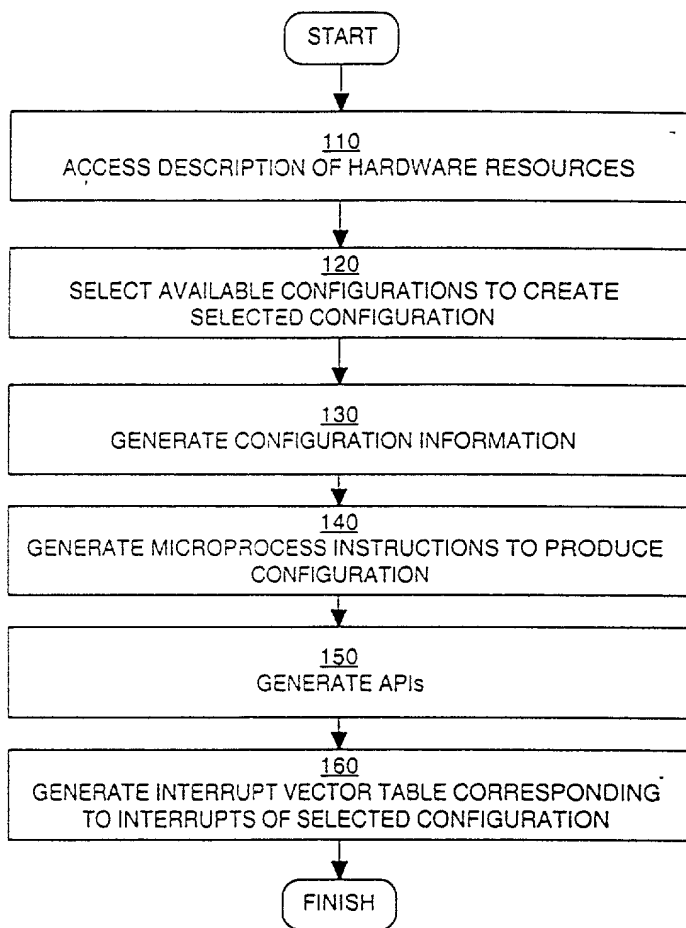


Figure 1

600

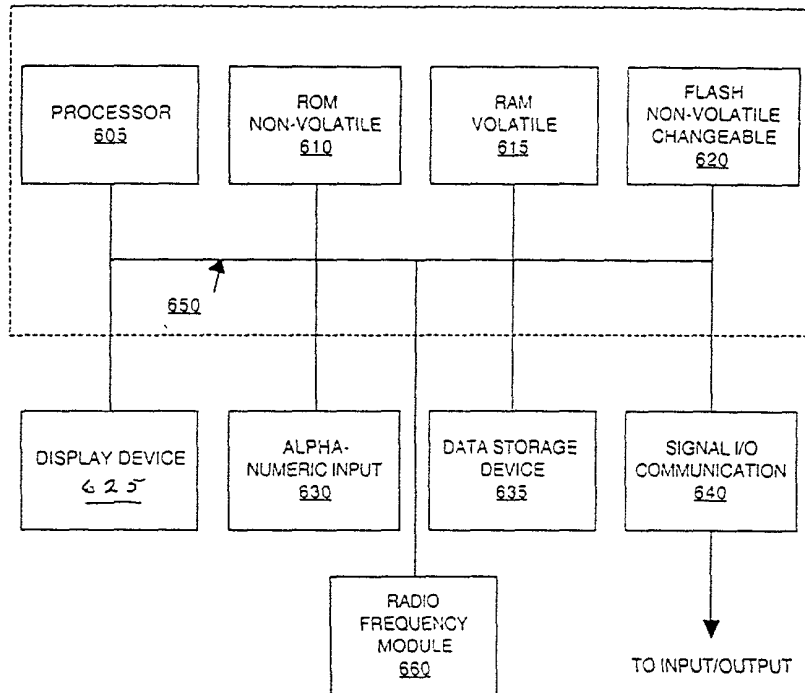


Figure 2

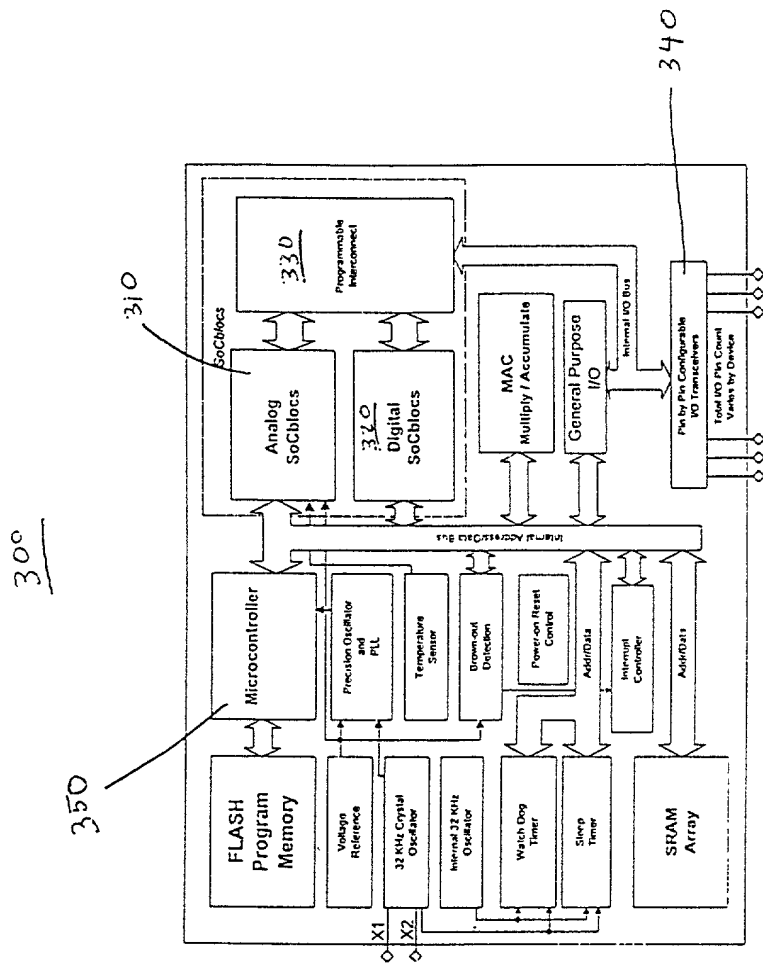
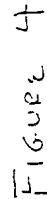


FIGURE 3



700

```

<!--Project DB Ver 0.03 08/10/00-->
702 -<PSOC_DEVICE_DB>
704 -<USER_MODULE_LIST>
    <!--Variable Resolution Incremental ADC-->
706 -<USER_MODULE_NAME="ADCEXP" TYPE="PSOC_ADC" ITTM="ADCEXP.ITTM" ICON="ADC.ico" METAPHIL="ADCEXP.cmf"
    API_PATH_TYPE="CUSTOM">
707 -<SHAPE_SHAPE_TYPE="BLOCKLIST">
708 -<BLOCK_LIST>
710 -<BLOCK_NAME="ADC" TYPE="ANALOG_SC">
712 -<REGISTER_LIST>
714 -<REGISTER_NAME="CR0">
716 -<BITFIELD_LIST>
718 -<BITFIELD_NAME="OSZ" VALUE="OSZ_32"/>
    <BITFIELD_NAME="CLOCK_PHASE" VALUE="PHASE_NORM"/>
    <BITFIELD_NAME="SIGN" VALUE="POS"/>
    <BITFIELD_NAME="CAP_SIZE" VALUE="16"/>
    </BITFIELD_LIST>
    </REGISTER>
    <REGISTER_NAME="CR1">
    <BITFIELD_LIST>
    <BITFIELD_NAME="CAP_SIZE" VALUE="0"/>
    </BITFIELD_LIST>
    </REGISTER>
    <REGISTER_NAME="CR2">
    <BITFIELD_LIST>
    <BITFIELD_NAME="A_OUT" VALUE="DISABLED"/>
    <BITFIELD_NAME="COMP_OUT" VALUE="ENABLED"/>
    <BITFIELD_NAME="AZ_PHASE" VALUE="AZ_P111"/>

```

Figure 7 A

```

<BITFIELD NAME="CAP_SIZE" VALUE="0"/>
</BITFIELD_LIST>
<REGISTER>
<REGISTER NAME="CR3">
<BITFIELD_LIST>
<BITFIELD NAME="REF_SELECT" VALUE="COMP"/>
<BITFIELD NAME="FD_CAP_SELECT" VALUE="PI12_AZ_ENABLE"/>
<BITFIELD NAME="FD_CAP_GND" VALUE="GND_P11"/>
<BITFIELD NAME="SCA_INPUT_MUX_B" VALUE="IN2B"/>
<BITFIELD NAME="SCB_INPUT_MUX_B" VALUE="IN2B"/>
<BITFIELD NAME="SHB" VALUE="DISABLE"/>
<BITFIELD NAME="PWR_SELECT" VALUE="PWR_OFF"/>
</BITFIELD_LIST>
</REGISTER>
</REGISTER_LIST>
720 - <INPUT_LIST>
</BLOCK>
</BLOCK_LIST>
<BLOCK NAME="TMR" TYPE="DIGITAL" INTERRUPT_SOURCE="TMR_IN" INTERRUPT_TYPE="JUMP">
<REGISTER_LIST>
<REGISTER NAME="DIG_BasicFunction">
<BITFIELD_LIST>
<BITFIELD NAME="End" VALUE="I_End"/>
<BITFIELD NAME="CompareType" VALUE="LtoEQ"/>
<BITFIELD NAME="InterruptType" VALUE="TerminalCount"/>
<BITFIELD NAME="Function" VALUE="Timer"/>
</BITFIELD_LIST>
</REGISTER>
<REGISTER NAME="DIG_Input">
<BITFIELD_LIST>
<BITFIELD NAME="DataSelect" VALUE="High"/>
</BITFIELD_LIST>
</REGISTER>

```

Figure 7B


```

<REGISTER NAME="DIG_Output">
  <BITFIELD_LIST>
    <BITFIELD NAME="AUXOutputEnable" VALUE="DISABLE"/>
    <BITFIELD NAME="DigOutputEnable" VALUE="DISABLE"/>
  </BITFIELD_LIST>
</REGISTER>
</REGISTER_LIST>
<INPUT_LIST>
  <BLOCK>
    <BLOCK_LIST>
      <BLOCK NAME="CNT_LSB" TYPE="DIGITAL">
        <REGISTER_LIST>
          <REGISTER NAME="DIG_BasicFunction">
            <BITFIELD_LIST>
              <BITFIELD NAME="Function" VALUE="Counter"/>
              <BITFIELD NAME="CompareType" VALUE="LToEQ"/>
            </BITFIELD_LIST>
          </REGISTER>
        </REGISTER_LIST>
      </BLOCK>
    </BLOCK_LIST>
  </INPUT_LIST>
  <INPUT SOURCE="AnalogOut" TYPE="RESERVED_RESOURCE!" REGISTER_NAME="DIG_Input"
    BITFIELD="DataSelect"/>
  </INPUT_LIST>
</BLOCK>
<BLOCK NAME="CNT_MSB" TYPE="DIGITAL" INTERRUPT_SOURCE="CNT_INT" INTERRUPT_TYPE="JUMP">
  <REGISTER_LIST>
    <REGISTER NAME="DIG_BasicFunction">
      <BITFIELD_LIST>
        <BITFIELD NAME="Function" VALUE="Counter"/>
        <BITFIELD NAME="End" VALUE="IsEnd"/>
        <BITFIELD NAME="CompareType" VALUE="LToEQ"/>
      </BITFIELD_LIST>
    </REGISTER>
  </REGISTER_LIST>

```

FIGURE 7C

```

</REGISTER_LIST>
<INPUT_LIST>
<INPUT_LIST>
<INPUT_LIST>
<BLOCK>
</BLOCK>
</BLOCK_LIST>
</RESOURCE_LIST>
<RESOURCE_NAME:=<AnalogOut" TYPE:=<ANALOG_COMPARATOR_OUTPUT">
<INPUT_LIST>
<INPUT_SOURCE:=<ADC" TYPE:=<BLOCK" />
</INPUT_LIST>
</RESOURCE_LIST>
</RESOURCE_LIST>
</SHAPE>
</PARAMETER_LIST>
<PARAMETER_NAME:=<ADCINPUT_SCB" TYPE:=<INPUT" SOURCE:=<ADC" REGISTER_NAME:=<CR1"
BITFIELD:=<SCB_INPUT_MUX_A">
<PARAMETER_NAME:=<ADCINPUT_SCA" TYPE:=<INPUT" SOURCE:=<ADC" REGISTER_NAME:=<CR1"
BITFIELD:=<SCA_INPUT_MUX_A_C">
<PARAMETER_NAME:=<ClockPhase" TYPE:=<BLOCK" SOURCE:=<ADC" REGISTER_NAME:=<CR0"
BITFIELD:=<CLOCK_PHASE">
<PARAMETER_NAME:=<TMRCLK" TYPE:=<CLOCK" SOURCE:=<TMR" REGISTER_NAME:=<DIG_Input"
BITFIELD:=<ClockSelect">
<PARAMETER_NAME:=<CTRLCLK1" TYPE:=<CLOCK" SOURCE:=<CNT_LSB" REGISTER_NAME:=<DIG_Input"
BITFIELD:=<ClockSelect">
<PARAMETER_NAME:=<CTRLCLKM" TYPE:=<CLOCK" SOURCE:=<CNT_MSB" REGISTER_NAME:=<DIG_Input"
BITFIELD:=<ClockSelect">
</PARAMETER_LIST>
<API_REGISTER_ALIAS_LIST>
<API_REGISTER_ALIAS_NAME:=<AtoDer0" SOURCE:=<ADC" REGISTER_NAME:=<CR0">
<API_REGISTER_ALIAS_NAME:=<AtoDer1" SOURCE:=<ADC" REGISTER_NAME:=<CR1">
<API_REGISTER_ALIAS_NAME:=<AtoDer2" SOURCE:=<ADC" REGISTER_NAME:=<CR2">
<API_REGISTER_ALIAS_NAME:=<AtoDer3" SOURCE:=<ADC" REGISTER_NAME:=<CR3">
<API_REGISTER_ALIAS_NAME:=<CounterMSBFN" SOURCE:=<CNT_MSB" REGISTER_NAME:=<DIG_BasicFunction"/>

```

Figure 7D

